

**Tobacco Use Among School Children Of**  
**Shivapuri Secondary School**  
**Kathmandu**



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**SUBMITTED TO**  
NEPAL HEALTH RESEARCH COUNCIL  
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**SUBMITTED BY**  
Dr. Gopal Prasad Acharya, MRCP, FRCP,  
Professor and Chairman, Department of Internal  
Medicine, IOM, Maharajgunj, Kathmandu  
  
Shivalal Acharya, Medical Student, IOM,  
Maharajgunj Campus, Maharajgunj, Kathmandu



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PREFACE

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It's a great opportunity for me to work with a distinguished personnel prof. Dr. G.P. Acharya. During this period I got chance to learn lots of things besides research work. He provided me a constant moral support, encouragement, his important time despite his business. He taught me to work hard, to be a punctual and to work honestly in any field.

This study basically reflected the prevalence of Cigarette smoking among the school children of Shivapuri Secondary School. It also covered the attitude and behavior towards smoking, distribution of smokers according to ethnicity and father's educational status. It also pointed out whether there were any school programs or syllabi related to tobacco control and whether the school celebrated 'No Tobacco Day'.

October...2001

Shivalal Acharya

## ACKNOWLEDGEMENTS

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Our special thanks goes to Mr. Bhimsen Devkota for his co-operation and his help to bring out the final form of this report.

We also give special thanks to Mr. Madhav Sapkota for providing computer work.



## EXECUTIVE SUMMARY

In order to assess the prevalence of tobacco use among school students, a questionnaire-based study was undertaken in Shivapuri Secondary School in Kathmandu. The type of tobacco consumed, age of commencement, duration of smoking, quantity consumed per day and age of quitting were studied. Smoking behavior and attitude towards smoking were included. The questionnaire also included whether there were any school programs or syllabi related to tobacco control and whether the school celebrated 'No Tobacco Day'.

The study revealed that out of a total of 814 students under study, 82 students ( 10.07%) were regular smokers. Out of 82 regular smokers, 72 were male smokers and 10 were female smokers. Further breakdown into different age group showed that smoking was most common among the students of age group above 15 years. There were 33 students in this age group out of total 82 smokers comprising 19.88%.

Out of a total of 814 students, 202 of them (24.82%) were using tobacco in forms other than smoking. This included the students using these products daily and occasionally as well as only during festivals.

It was also found that 27 students (3.32% ) had already quit smoking before this study .

There were no school programs related to 'No Tobacco Day'. The school syllabus related to tobacco control had only been implemented in classes 9 and 10<sup>1</sup>.

### Key –Words

prevalence, regular smokers, ex-smokers  
Tobacco in forms other than smoking: *pan, pan parag/Guthkha, Khaini/surti, tambaku, Oral and nasal snuff*



## INTRODUCTION

Tobacco use is increasing in an alarming rate in the developing countries including Nepal. Globally about 4 million people are dying every year due to its use which means around 11,000 deaths everyday. If the current trend persists 10 to 30 million people will die in the next three decades of which 70% of deaths will be in developing countries<sup>2</sup>.

It's a long time gap that the prevalence of smoking has not been calculated. To fulfill this shortcoming and to bring a specific result on different target group of population, school children were undertaken for this purpose.

Most of the people who become addicted in later life have started smoking in their earlier life. Considering the fact that children below 14 years comprise 45% of population of Nepal. This study will certainly help all the ongoing tobacco control programmes and to bring specific control measures targeted to this group of population to reduce the tobacco epidemic

## OBJECTIVES OF THE PRESENT STUDY

1. To ascertain the prevalence of tobacco use among school children in secondary school (class 4-10).
2. To ascertain the attitude, behaviour and feelings towards smoking.
3. To find out the variation of tobacco use according to ethnicity and educational status of father.
4. To find out whether there are any school programs or syllabi related to tobacco control.

## MATERIALS AND METHODS

This study was a descriptive study of tobacco use among school children in Nepal. The study was conducted in Shivapuri Secondary School which is located in Maharajgunj, Kathmandu and is under the supervision of government of Nepal. The school admits students from class one to class ten.

A questionnaire was developed to ascertain the tobacco using behaviour of the students which included the type of tobacco used, age of commencement, reasons for starting to smoke, number of cigarettes smoked per day, duration of smoking and age of quitting.

The study population included the students from class 4 -10. Out of total 1030 enrolled students, 814 students (79.03%) were present during the time of this study. The questionnaire was distributed to all the students of a class at one time and they were given an orientation about the questionnaire so as to ensure correct responses.

The questionnaire was collected. Data processing and analysis were done and the results were presented in the form of tables, charts and graphs.

## DEFINITIONS OF THE TERMINOLOGIES (GIVEN BY W.H.O.)

- **Regular smoker:** smokes at least one cigarette a day.
- **Occasional smoker:** smokes cigarettes but not everyday.
- **Ex-smoker:** smoked at least one cigarette a day for at least 6 months before giving up completely.
- **Non-smoker:** never smoked before or smoked too little in the past to be regarded as ex-smoker



## RESULT

### PREVALENCE OF TOBACCO USE

#### (A) CIGARETTE SMOKING

Analysis of the data regarding the smoking behaviour (table-I) showed that out of 814 students under study, seven hundred and five (86.61%) were non smokers, eighty two (10.07%) were regular smokers, twenty seven (3.32%) were ex-smokers and none were occasional smokers.

Among the regular smokers, smoking habit was most common among the students of age group above 15 years in which there were 33 students in this age group comprising 19.88% of all smokers. There were 72 male smokers comprising 17.27% of all male students and 10 female smokers comprising 2.52% of all female students. The most common age group among boys was more than 15 years and the same among girls was 13-15 years as shown in table-II.

**Table-I**

Distribution of students according to smoking behavior

Smoking behavior	number of respondents
Non-Smokers	705(86.61%)
Ex-Smokers	27(3.32%)
Occasional Smokers	0
Regular Smokers	82(10.07%)

**Table -II**

Age and sex distribution of regular smokers

S N	Age group	Male		Female		Total	
		No. of students studied	Smokers	No. of students studied	Smokers	No. of students studied	Smokers
1	< 10	0	0 (0%)	3	0 (0%)	3	0(0.00%)
2	10 – 12	80	9 (11.25%)	96	1 (1.04%)	176	10(5.68%)
3	13 – 15	225	32 (12.54%)	214	7 (3.27%)	439	39(8.88%)
4	> 15	82	31 (37.80%)	84	2 (2.38%)	166	33(19.88%)
	Total	417	72 (17.27%)	397	10 (2.52%)	814	82(10.07%)

## B) TOBACCO IN FORMS OTHER THAN SMOKING

The number of students using tobacco in forms other than smoking was two hundred two ( 24.82%). Out of different forms of tobacco being used in forms other than smoking, most common form was *pan* by one hundred fifty nine students (78.71%). Out of 159 *pan* users, one hundred twelve (70.45%) were using occasionally, thirty-three (20.75%) were using only in festivals and fourteen (8.80%) were using daily. The second commonest form was *pan parag/guthkha* that was used by 63 students (31.18%). Out of 63 students, thirty eight students (60.32%) were using occasionally, sixteen students (25.40%) were using daily and nine (14.28%) were using only in festivals (*Dashain, Tihar*) It was also found that nine students (4.45%) were using *Khaini/surti* regularly. Five students (2.47%) were found smoking *tambaku* occasionally. Similarly one student (0.49%) was smoking cigar and another one (0.49%) was using oral snuff occasionally as shown in table -IV.

The most common age group for boys using tobacco in forms other than smoking was above 15 years in which 34 of them (41.46%) were using it and that for girls was 13 –15 years in which 38 of them (17.75%) were using tobacco in other forms as shown in Table-III.

**Table-III**

Age and Sex distribution of tobacco users in forms other than smoking

S N	Age Group	Male		Female		Total	
		No. of students studied	Tobacco Users in forms other than smoking	No. of students studied	Tobacco Users in forms other than smoking	No. of students studied	Tobacco Users in forms other than smoking
1	< 10	0	0 (0.00%)	3	0 (0.00%)	3	0(0%)
2	10 – 12	80	24 (30.00%)	96	8 (8.30%)	176	32 (18.18%)
3	13 – 15	225	87 (34.11%)	214	38 (17.75%)	439	125 (28.47%)
4	> 15	82	34 (41.46%)	84	11 (13.09%)	166	45 (27.10%)
Total		417	145 (34.77%)	397	57 (14.35%)	814	202 (24.82%)



**Table-IV**

Distribution of Tobacco users in Other forms according to items used

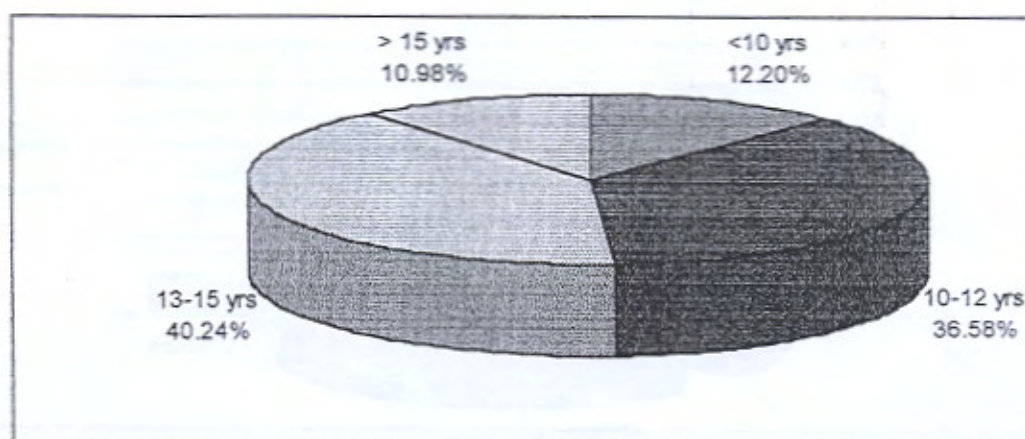
Items	No. of users			Total
	Daily	sometimes	Festival	
Pan	14(8.80%)	112(70.45%)	33(20.75%)	159(78.71%)
Pan parag	16(25.40%)	38(60.32%)	9(14.28%)	63(31.18%)
Khaini,Surti	9	0	0	9(4.45%)
Tambaku	0	5	0	5(2.47%)
Cigar	0	1	0	1(0.49%)
Oral snuff	0	1	0	1(0.49%)
Nasal snuff		0		0
Total				202

**(I) REGULAR SMOKERS****(A) AGE OF COMMENCEMENT**

Out of 82 regular smokers, 33 smokers (40.24%) started smoking at the age of 13-15 years, 30 smokers (36.58%) started at the age between 10-12 years and 9 smokers (10.98%) started at the age above 15 years. Surprisingly, 10 smokers (12.20%) started at the age less than 10 years as shown in Chart-I

**Chart-I**

Distribution of regular smokers by age of commencement

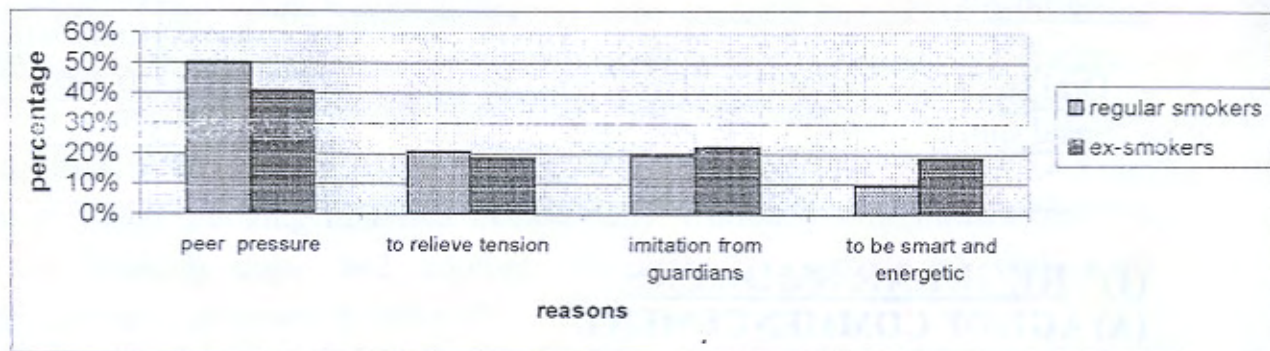


## (B) REASONS FOR STARTING TO SMOKE

Graph I shows that 41 smokers (50.00%) started to smoke due to peer pressure followed by 17 smokers (20.73%) to relieve tension. 16 smokers (19.51%) followed their parents' habit and 8 smokers (9.76%) started smoking to become smart and energetic

**Graph -I**

Distribution of Regular and Ex-smokers according to reasons for starting to smoke

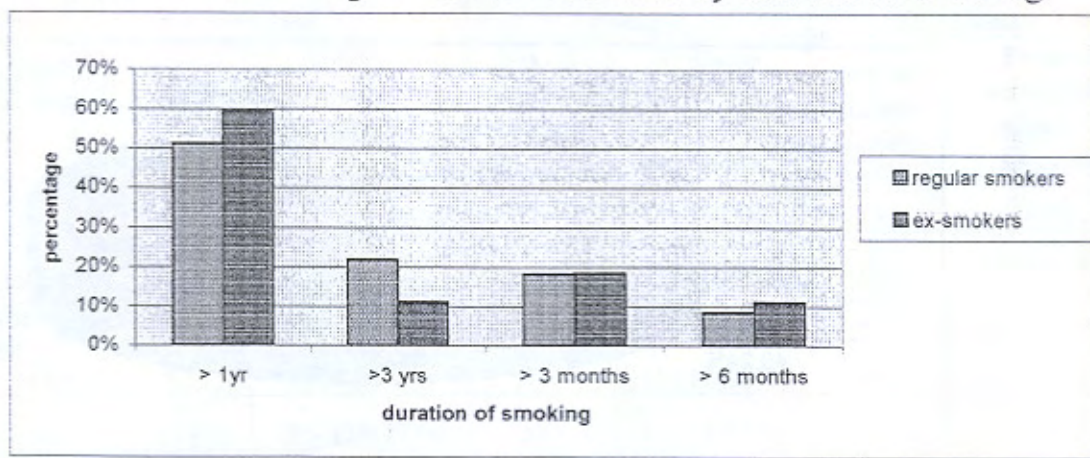


## (C) DURATION OF SMOKING

Regarding the duration of smoking, 42 smokers (51.22% ) have been smoking for more than 1 year followed by 18 smokers (21.95% ) for more than 3 years. Similarly, the number of smoker smoking for more than 3 months was 15 which comprises 18.29% of the total regular smokers and for more than 6 months was 7 comprising 8.54% as shown below in Graph -II

**Graph -II**

Distribution of Regular and Ex-Smokers by duration of smoking



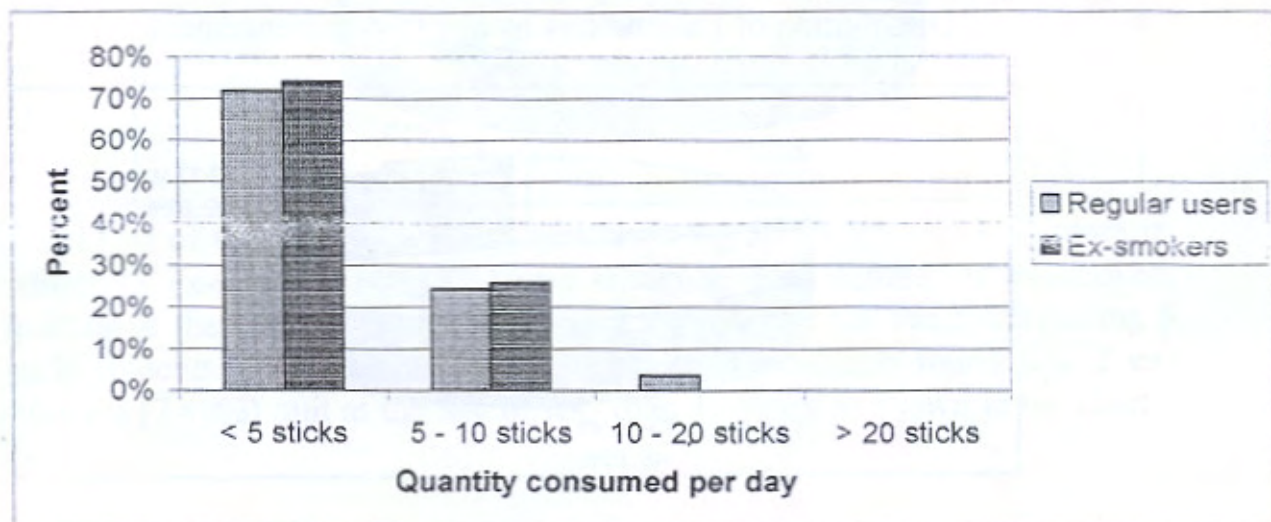


#### (D) QUANTITY CONSUMED PER DAY

As shown in the Graph III, the number of regular smokers smoking less than 5 cigarettes per day was fifty nine (71.95%), 5-10 cigarettes per day was twenty (24.39%), 10-20 cigarettes per day was three (3.66%) and none were smoking more than 20 cigarettes per day.

**Graph-III**

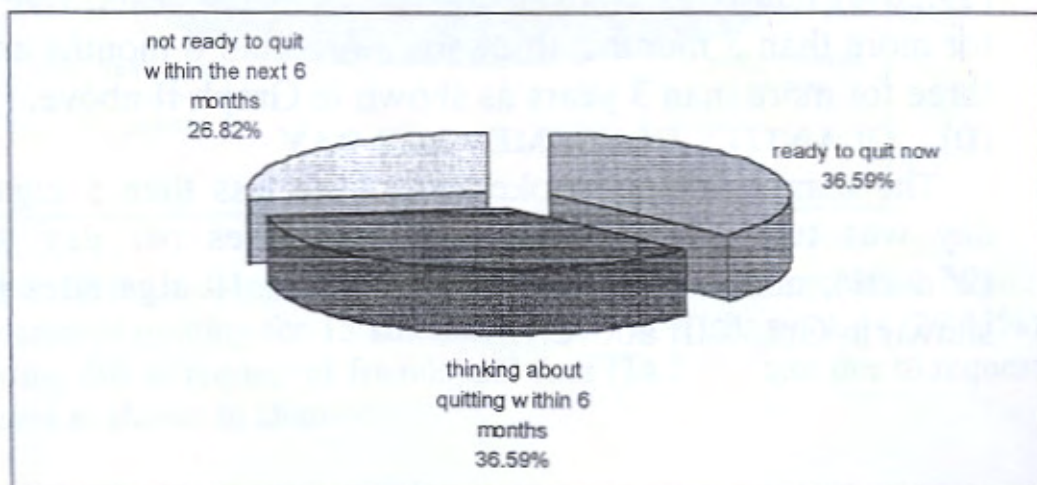
Distribution of Regular and Ex-smokers by quantity consumed per day



#### (E) ATTITUDE TOWARDS SMOKING

About attitude towards smoking, thirty regular smokers (36.59%) were ready to quit smoking immediately and another thirty (36.59%) were thinking to quit within 6 months. Twenty-two smokers (26.82%) were not ready to quit within next 6 months as shown in chart-II.

**Chart-II**



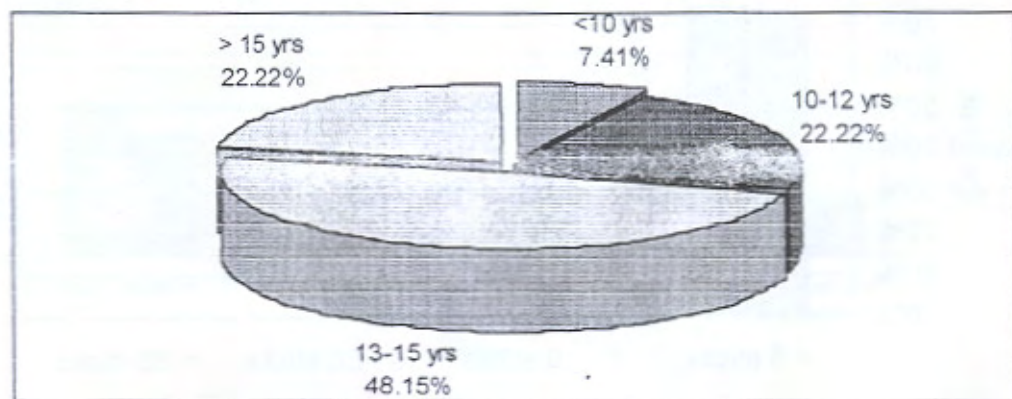
## (II) EX-SMOKERS

### (A) AGE OF COMMENCEMENT

Out of 27 ex-smokers, eleven of them (40.74%) had started smoking at the age of 10-12 years whereas ten (37.04%) started at the age between 13-15 years. Four of them (14.81%) had started at the age of less than 10 years and two (7.41%) started at the age of above 15 years as shown in Chart-III

**Chart -III**

Distribution of Ex-smokers by age of commencement



### (B) REASONS FOR STARTING TO SMOKE

It is found that eleven of ex-smokers (40.74%) had started to smoke due to peer pressure, six (22.22%) followed their parents' habit, five started to become smart and energetic and another five started to relieve tension as shown in Graph I above.

### (C) DURATION OF SMOKING

Regarding the duration of smoking, sixteen of ex-smokers (59.26%) had been smoked for more than 1 years, five (18.52%) for more than 3 months, three for more than 6 months and another three for more than 3 years as shown in Graph II above.

### (D) QUANTITY CONSUMED PER DAY

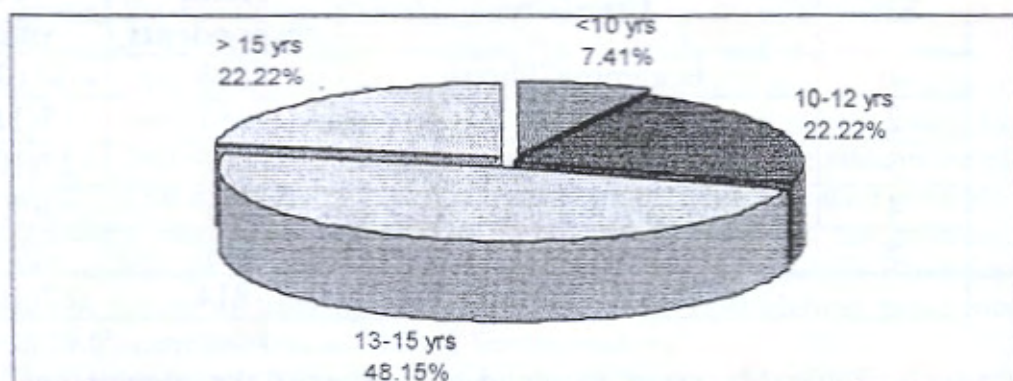
The number of ex-smokers smoking less than 5 cigarettes per day was twenty (74.07%), 5-10 cigarettes per day was seven (25.93%), none were smoking more than 10 cigarettes per day as shown in Graph III above.



## (E) AGE OF QUITTING

Chart -IV

Distribution of Ex-Smokers by age of quitting

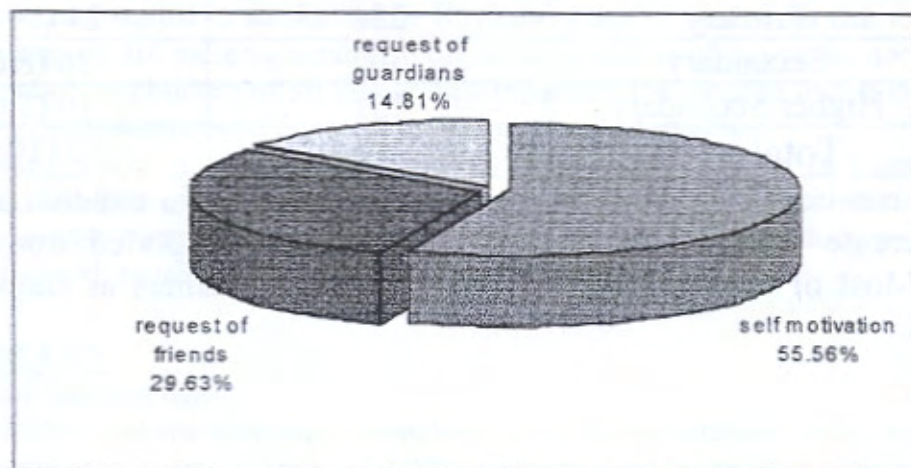


Most of the ex-smokers had quit smoking at the age of 13-15 years in which 13 ex-smokers (48.15%) quit smoking. The number of ex-smokers quitting at the age of 10-12 and above 15 years was the same comprising 5 such students (22.22%) in each age group. It was also found that 2 ex-smokers (7.40%) quit at the age of less than 10 years as shown in the chart - IV.

## (F) CAUSE OF QUITTING

Chart -V

Distribution of Ex-smokers according to cause of quitting



Most of the ex-smokers quit smoking due to self motivation which was the cause of quitting for 15 smokers (55.56%). Eight smokers (29.63%) quit smoking due to request of friends and four (14.81%) quit due to request of guardians as shown in chart-V.

**Table-V**

Distribution of the regular smokers according to ethnicity

SN	Ethnicity	No. of respondents	Total smokers
1	Brahmin/Chhetri	338	33 (9.76%)
2	Newar	151	17(11.25%)
3	Gurung, Magar, Sherpa, Lama	266	27(10.15%)
4	Damai/Kami/Sarki	33	3(9.10%)
5	Others	26	2(7.60%)
	Total	814	82(10.07%)

Table V shows ethnic distribution of the regular smokers. It is found that 17 of them (11.25%) were Newar followed by 27, being Gurung, Magar, Sherpa and Lama (10.15%).

**Table -VI**

Distribution of regular smokers by father's education

SN	FATHERS EDUCATION	No. of respondents	Total smokers
1	Illiterate	145	22 (15.17%)
2	Primary	236	24 (10.16%)
3	Secondary	302	26 (8.60%)
4	Higher Secondary	131	10 (7.63%)
	Total	814	82 (10.07%)

It has been observed that the trend of smoking in children decreased with increase in educational level. This fact was reported from another study<sup>9</sup>. Most of the smokers belonged to illiterate fathers as shown in the table-VI.



## DISCUSSION

In the present study, the prevalence of cigarette smoking was 10.07% and the prevalence of tobacco users in various other forms (*pan, pan parag/gutha, khaini/surti, tambaku, oral snuff and nasal snuff*) was 24.82%.

Regarding the prevalence of smoking in Nepal, the results of 1983 survey showed overall prevalence of 73.7% daily smokers, 85.4% male and 62.4% female. The Prevalence rate differ by region from 77.7% in high mountain area to 37% in urban Kathmandu<sup>3</sup>. A similar study in 1988 showed prevalence of daily smoking was, 84.7% for males and 71.7% for females in high mountain area (Jumla). The rates in the plains (Terai) was 78.7% for males and 58.9% for females while in Kathmandu it is 64.5% and 14.2% respectively<sup>4</sup>. Another study of smoking among adults showed the prevalence of 73% in kotyang Village in Kavre district and 62% in suburban locality Bhadrakali in Kathmandu<sup>5</sup>. A survey of smoking in Sunsari district in 1994 showed prevalence of 17.5% with 19.6% male smokers and 15.4% female smokers<sup>6</sup>.

There were some studies that have estimated the prevalence of smoking among children. A study in Dhankuta district among the children of the age group 5 to 14 years had reported that 11% children were smokers<sup>7</sup>. Among the same age group (5-14 years), the prevalence of smoking was very high in Jumla (51%)<sup>8</sup>. The educational status, overall socio-economic condition, parents habit and cold climatic conditions of the place may be the possible reasons for this difference.

A similar study in Dhankuta district among the children of the age group 5 to 14 years had reported that 11% children were smokers<sup>3</sup>. Among the same age group (5-14 years), the prevalence of smoking was very high in Jumla (51%)<sup>4</sup>. The educational status, overall socio-economic condition, parents habit and cold climatic conditions of the place may be the possible reasons for this difference.

In the present study the most common age group for smoking was 13-15 years as shown in table II. The most common age of starting seems to be 13-15 years of age. Some students started to smoke below 10 years of age. It is obvious that the students of these age group are more vulnerable to the harmful effects of its use. So it is important to pay attention to children of all age groups regarding the tobacco use. It is necessary to have intervention programs directed to all age groups of students.

Table III shows most of the students were using tobacco in forms other than smoking. The particular form of importance is betel quid (*pan*) which was used by many. This is because many of them thought that it was a non-tobacco products and accepted by females as well as taken in the festival (*Tihar*) by many families.

## SUMMARY

This study showed that

- (1) 10.07% students were regular smokers, 24.82% students were using tobacco in forms other than smoking and 3.32% students were Ex-smokers. The age of starting smoking is from 10 years with maximum prevalence in 13-15 years. The smoking habit was most common among the students of above 15 years comprising 19.88% of students for that age group.
- (2) Educational status of father has significantly influenced the smoking habit of children. Most of the smokers belonged to illiterate fathers (15.17%).

- (3) Ethnic distribution showed that the most of the smokers belonged to Newar (11.25%) followed by Gurung, Magar, Lama and Sherpa (10.15%).
- (4) There were no school programs related to 'No Tobacco Day'. School syllabus related to tobacco control had only been implemented in class 9 and 10<sup>1</sup>.

## CONCLUSIONS

The study shows that the habit of smoking starts in early age even below 10 years of age and currently 10.07% of children in secondary school are smoking. Considering the fact that children below 14 years comprise 45% of population of Nepal, it is essential that tobacco programme is started in school starting from class-4 (primary school). The ministry of Education, teachers of school and those involved in anti-tobacco programme in the country should work together to implement Health Education and anti-tobacco programme in schools in Nepal.



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## Annex-I

### Budgeting

S.N.	particulars	Illustration	Amount
1	Questionnaire development and printing	1000 Questionnaire per copy Rs 2/	Rs 2,000/
2	Data collection	25 manday per day Rs. 500/	Rs 12,500/
3	Data processing and data analysis	12 manday per day Rs. 500/	Rs 6,000/
4	Report development		Rs 3,000/
5	Computer work	For whole the period	Rs 1,500/
6	Stationeries	For whole the period	Rs 1,500/
7	Transportation	For whole the period	Rs 2,000/
8	Miscellaneous		Rs 1,500/
		Total	Rs 30,000/



**Tobacco Use Among School Children**  
**Questionnaire**

Name of School.....

Name of Student .....

Age.....

Sex.....

Ethnicity.....

Father's education

- a) Illiterate
- b) Primary
- c) Secondary
- d) Higher Secondary

Father's occupation.....

- 1) Which one of the following best describes your smoking behavior?
  - a) I have never smoked cigarettes.
  - b) I smoke occasionally.
  - c) I quit smoking.
  - d) I smoke everyday.
- 2) If you are a occasional or regular smoker-
  - a) How old were you when you first started to smoke?.....years
  - b) How did you start smoking?
    - I) Peer Pressure
    - II) Imitation from Guardians
    - III) To be smart and energetic
    - IV) To relieve tension
    - V) To enjoy and to pass the time easily
  - c) To whom with you started your first puff?
    - I) Friends
    - II) Guardians
    - III) Alone
    - IV) Others.....
  - d) For how long are you smoking?
    - I) >3 months
    - II) >6 months
    - III) >1 year
    - IV) >3 years
  - e) On an average how many sticks do you smoke per day?
    - I) <5 sticks
    - II) 5-10 sticks
    - III) 10-20 sticks
    - IV) >20 sticks

f) Have you tried to quit smoking seriously?

- I) yes
- II) no

g) Which one of the following best describes how you feel about your smoking?

- I) Not ready to quit within next 6months
- II) Thinking about quitting within 6 months
- III) Ready to quit now

3) If you are an occasional smoker, at what interval of time do you smoke?

.....

4) If you had quit smoking-

a) How old were you when you first started to smoke?.....years

b) How did you start smoking?

- I) Peer Pressure
- II) Imitation from Guardians
- III) To be smart and energetic
- IV) To relieve tension
- V) To enjoy and to pass the time easily

c) To whom with you started your first puff?

- I) Friends
- II) Guardians
- III) Alone
- IV) Others.....

d) For how long did you smoke?

- I) >3 months
- II) >6 months
- III) >1 year
- IV) >3 years

e) On an average how many sticks do you smoke per day?

- I) <5 sticks
- II) 5-10 sticks
- III) 10-15 sticks
- IV) >15 sticks

f) why did you quit smoking?

- I) request of friends
- II) request of parents
- III) self motivation
- IV) others.....

g) At what age did you quit smoking? ..... years